



PATENT
Attorney Docket No. 60816

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Mary Bendig *et al.*

Serial No.: 10/070,566

Group No.: 1638

Filed: 03/07/02

Examiner: Mehta, A.D.

Entitled: **Chimaeric Plant Viruses With Mucin Peptides**

INFORMATION DISCLOSURE STATEMENT

MS Amendment

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

CERTIFICATE OF MAILING UNDER 37 CFR § 1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on **November 29, 2004**.

By: 

Cliff Cannon-Cin

Sir or Madam:

The citations listed below, may be material to the examination of the above-identified application, and are therefore submitted in compliance with the duty of disclosure defined in 37 C.F.R. §§ 1.56 and 1.97. The Examiner is requested to make these citations of official record in this application.

The following printed publications are referred to in the body of the specification.

Copies of the non-U.S. Patent references are provided herein:

- U.S. Patent No. 4,963,484 to Kufe, "Genetically engineered polypeptides with determinants of the human DF3 breast carcinoma-associated antigen," 1990;
- U.S. Patent No. 5,053,489 to Kufe, "Genetically engineered polypeptides with determinants of the human DF3 breast carcinoma-associated antigen," 1991;
- WO 92/18618 of Lomonossoff *et al.*, "Modified plant viruses as vectors," 1992;
- WO 96/02649 of Lomonossoff, "Modified plant viruses as vectors of heterologous peptides," 1996;
- Almeida and Alpar, "Nasal delivery of vaccines," *J Drug Target*, 3:455-467, 1996 (not supplied at this time);

- Apostolopoulos and McKenzie, "Cellular mucins: targets for immunotherapy," *Crit Rev Immunol*, 14:293-309, 1994;
- Burchell *et al.*, "Complexity of expression of antigenic determinants, recognized by monoclonal antibodies HMFG-1 and HMFG-2, in normal and malignant human mammary epithelial cells," *J Immunol*, 131:508-513, 1983;
- Dalsgaard *et al.*, "Plant-derived vaccine protects target animals against a viral disease," *Nature Biotechnol*, 15:248-252, 1997;
- Dessens and Lommonossoff, "Cauliflower mosaic virus 35S promoter-controlled DNA copies of cowpea mosaic virus RNAs are infectious on plants," *J Gen Virol*, 74:889-892, 1993;
- Dolja and Koonin, "Phylogeny of capsid proteins of small icosahedral RNA plant viruses," *J Gen Virol*, 72:1481-1486, 1991;
- Graham *et al.*, "Intramuscular immunisation with MUC1 cDNA can protect C57 mice challenged with MUC1-expressing syngeneic mouse tumour cells," *Int J Cancer*, 65:664-670, 1996;
- Kaminski *et al.*, "Importance of antibody isotype in monoclonal anti-idiotypic therapy of a murine B cell lymphoma. A study of hybridoma class switch variants," *J Immunol*, 136:1123-1130, 1986;
- Modelska *et al.*, "Immunization against rabies with plant-derived antigen," *Proc Natl Acad Sci, USA*, 95:2481-2485, 1998;
- Mosmann *et al.*, "Two types of murine helper T cell clone. I. Definition according to profiles of lymphokine activities and secreted proteins," *J Immunol*, 136:2348-2357, 1986;
- Porta *et al.*, "Development of cowpea mosaic virus as a high-yielding system for the presentation of foreign peptides," *Virology*, 202:949-955, 1994;
- Usha *et al.*, "Expression of an animal virus antigenic site on the surface of a plant virus particle," *Virology*, 197:366-374, 1993; and
- Zhang *et al.*, "Augmenting the immunogenicity of synthetic MUC1 peptide vaccines in mice," *Cancer Research*, 56:3315-3319, 1996.

In addition, the following references were cited in the International Search Report of the parent application (PCT/GB00/03500), and are relevant for the reasons disclosed therein.

Copies of these references have already been provided to the Office:

- WO 98/37095 of Schlom *et al.*, "Recombinant pox virus for immunization against MUC1 tumor-associated antigen," 1998;
- WO 98/56933 of Lomonossoff *et al.*, "Polypeptide presentation system," 1998;
- WO 98/50527 of Agrawal *et al.*, "Method for generating activated T-cells and antigen-pulsed antigen-presenting cells," 1998;
- Akagi *et al.*, "Therapeutic antitumor response after immunization with an admixture of recombinant vaccinia viruses expressing a modified MUC1 gene and the murine T-cell costimulatory molecule B7," *J Immunother*, 20:38-47, 1997;
- Balloul *et al.*, "Recombinant MUC1 vaccinia virus: a potential vector for immunotherapy of breast cancer," *Cell Mol Biol* (Noisy-le grand), 40(S1):49-59, 1994;
- Graham *et al.*, "The polymorphic epithelial mucin: potential as an immunogen for a cancer vaccine," *Cancer Immunol Immunother*, 42:71-80, 1996; and
- Liu *et al.*, "Structurally defined synthetic cancer vaccines: analysis of structure, glycosylation and recognition of cancer associated mucin, MUC-1 derived peptides," *Glycoconj J*, 12:607-617, 1995.

This Information Disclosure Statement under 37 C.F.R. §§ 1.56 and 1.97 is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art.

Dated: November 29, 2004



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INFORMATION STATEMENT BY APPLICANT
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(37 CFR § 1.98(b))

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.	Serial / Patent Number	Issue Date	Applicant / Patentee	Class	Subclass	Filing Date
	1	4,963,484	10/16/90	Kufe	435	69.3	01/29/88
	2	5,053,489	10/01/91	Kufe	530	350	01/27/89

FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS

		Document Number	Publication Date	Country / Patent Office	Class	Subclass	Translation	
							Yes	No
	3	WO 92/18618	10/29/92	PCT				
	4	WO 96/02649	02/01/96	PCT				
	5	WO 98/37095	08/27/98	PCT				
	6	WO 98/50527	11/12/98	PCT				
	7	WO 98/56933	12/17/98	PCT				

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)

	8	Almeida and Alpar, "Nasal delivery of vaccines," <i>J Drug Target</i> , 3:455-467, 1996
	9	Apostolopoulos and McKenzie, "Cellular mucins: targets for immunotherapy," <i>Crit Rev Immunol</i> , 14:293,309, 1994
	10	Burchell <i>et al.</i> , "Complexity of expression of antigenic determinants, recognized by monoclonal antibodies HMFG-1 and HMFG-2, in normal and malignant human mammary epithelial cells," <i>J Immunol</i> , 131:508-513, 1983
	11	Dalsgaard <i>et al.</i> , "Plant-derived vaccine protects target animals against a viral disease," <i>Nature Biotechnol</i> , 15:248-252, 1997
	12	Dessens and Lommonossoff, "Cauliflower mosaic virus 35S promoter-controlled DNA copies of cowpea mosaic virus RNAs are infectious on plants," <i>J Gen Virol</i> , 74:889-892, 1993
	13	Dolja and Koonin, "Phylogeny of capsid proteins of small icosahedral RNA plant viruses," <i>J Gen Virol</i> , 72:1481-1486, 1991
	14	Graham <i>et al.</i> , "Intramuscular immunisation with MUC1 cDNA can protect C57 mice challenged with MUC1-expressing syngeneic mouse tumour cells," <i>Int J Cancer</i> , 65:664-670, 1996
	15	Kaminski <i>et al.</i> , "Importance of antibody isotype in monoclonal anti-idiotypic therapy of a murine B cell lymphoma. A study of hybridoma class switch variants," <i>J Immunol</i> , 136:1123-1130, 1986
	16	Modelska <i>et al.</i> , "Immunization against rabies with plant-derived antigen," <i>Proc Natl Acad Sci, USA</i> , 95:2481-2485, 1998
	17	Mosmann <i>et al.</i> , "Two types of murine helper T cell clone. I. Definition according to profiles of lymphokine activities and secreted proteins," <i>J Immunol</i> , 136:2348-2357, 1986
	18	Porta <i>et al.</i> , "Development of cowpea mosaic virus as a high-yielding system for the presentation of foreign peptides," <i>Virology</i> , 202:949-955, 1994
	19	Usha <i>et al.</i> , "Expression of an animal virus antigenic site on the surface of a plant virus particle," <i>Virology</i> , 197:366-374, 1993
	20	Zhang <i>et al.</i> , "Augmenting the immunogenicity of synthetic MUC1 peptide vaccines in mice," <i>Cancer Research</i> , 56:3315-3319, 1996
	21	Akagi <i>et al.</i> , "Therapeutic antitumor response after immunization with an admixture of recombinant vaccinia viruses expressing a modified MUC1 gene and the murine T-cell costimulatory molecule B7," <i>J Immunother</i> , 20:38-47, 1997
	22	Balloul <i>et al.</i> , "Recombinant MUC1 vaccinia virus: a potential vector for immunotherapy of breast cancer," <i>Cell Mol Biol (Noisy-le grand)</i> , 40(S1):49-59, 1994
	23	Graham <i>et al.</i> , "The polymorphic epithelial mucin: potential as an immunogen for a cancer vaccine," <i>Cancer Immunol Immunother</i> , 42:71-80, 1996
	24	Liu <i>et al.</i> , Structurally defined synthetic cancer vaccines: analysis of structure, glycosylation and recognition of cancer associated mucin, MUC-1 derived peptides," <i>Glycoconj J</i> , 12:607-617, 1995

Examiner:

Date Considered:

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.